GARANIN, Grigoriy Sergeyevich, inzh.; GALAKTIONOV, A.A., kand.arkhitektury, red.; VLADIMIROVICH, A.G., red.; PERSON, [illegible] tekhn.red.

[Construction of modern warm floors] Ustroistvo sovremennykh teplykh polov. Pod red. A.A.Galaktionova. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1959. 123 p. (MIRA 12:12)
(Floors)

SHEPELEV, Aleksandr Mikhaylovich, inzh.; GALAKTIONOV, A.A., nauchnyy red.; TELINGATER, L.A., red.; PODOBED, E.G., red.; RAKOV, S.I., tekhn.red.

[Plastering] Shtukaturnye raboty. Izd.3, perer. i dop. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1959. 415 p.
(Plastering) (MIRA 13:7)

GALAKTIONOV, A.A., kand. arkhitektury; TRUBNIKOVA, N.M., arkhitektor;
KEGLER, A.R., arkhitektor

Residential demonstration microdistric in Temir-Tau. Izv. ASiA no.1:65-71 '60. (MIRA 13:9)
(Temir-Tau--City planning)

GALAKTIONOV, A.A., kand.arkhitektury

Creative life of Vladimir Nikolaevich Semenov, Honorary Member of the Academy. Izv. ASiA no.1:124 '60. (MIRA 13:9)
(Semenov, Vladimir Nikolaevich, 1874-1960)

KRIVOLUTSKIY, Ivan Yevgen'yevich; KALEDINTSEV, Viktor Alekseyevich;
GALAKTIONOV, A.A., dotsent, kand.arkhitektury, red.; KOSYAKINA,
Z.K., red.izd-va; TEMKINA, G.L., tekhn.red.

[Flooring with liquid plastics] Nalivnye poly. Pod red.
A.A.Galaktionova. Moskva, Gos.izd-vo lit-ry po stroit., arkhit.
i stroit.materialam, 1961. 45 p. (MIRA 14:3)
(Floors)

GALAKTIONOV, Aleksandr Alekseyevich, kand. arkhitektury; RAZNIKOV, P., red.; KUZNETSOVA, A., tekhn. red.

[Finishing operations in rural construction] Otdelochnye raboty v sel'skom stroitel'stve. Moskva, Mosk. rabochii, 1961. 109 p. (MIRA 15:5)

(Building--Details)

KOSHKIN, V.G., kand. tekhn. nauk; GALAKTIONOV, A.A., kand. arkh.; LARKINA, V.I., inzh.; YANTIKOVA, M.P., inzh.; KAZAKOVA, G.N., tekhn.; GUZMAN, M.A., red. izd-va; SHERTNEVA, N.V., tekhn. red.

[Synthetic floor coverings] Sinteticheskie materialy dlia pokrytiia polov. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 155 p. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov. 2. Laboratoriya otdelochnykh plastmass Vsesoyuznogo nauchno-issledovatel'skogo instituta novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Koshkin, Galaktionov, Larkina, Yantikova, Kazakova).
(Floor coverings)

ABERKOV, Yevgeniy Mikhaylovich, inzh.; ZHELUDKOV, Vladimir Ivanovich, inzh.; GALAKTIONOV, A.A., nauchnyy red.; TELINGATER, L.A., red.; PERSON, M.N., tekhn. red.

[Manual for training and raising the qualifications of plasterers] Posobie dlia podgotovki i povysheniia kvalifikatsii shtukaturov. Moskva, Proftekhizdat, 1961. 191 p. (MIRA 14:10)
(Plastering)

GALAKTIONOV, Aleksandr Alekseyevich, kand. arkhitektury; PITSKEL', Lev Naumovich, kand. tekhn. nauk; SOKOLIN, Gerts Lazarevich, inzh.; SHAPIRO, Il'ya Grigor'yevich, inzh.; TARUTIN, N.P., nauchnyy red.; BEREZOVSKAYA, A.L., ved. red.; PEREDERIY, S.P., tekhn. red.; BARANOVA, N.N., tekhn. red.

[Handbook for the young plasterer] Spravochnik molodogo shtukatura. By A.A.Galaktionov i dr. Izd.2., ispr.i dop. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1961. 278 p. (MIRA 14:12)
(Plastering)

BOGATYKH, Ya.D.; GALAKTIONOV, A.A.; DZIKAN, V.A.; YEVSTYUGOV, A.I.;
KOZLOVSKIY, A.S.; MARTYNOV, P.T.; BANNIKOV, S.A., red.; PROKOF'YEVA, L.N., tekhn. red.

[Textbook for training agricultural construction workers]
Posobie po podgotovke rabochikh-stroitelei v sel'skom khoziaistve. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1961. 638 p.
(MIRA 14:5)

(Building trades)

GARANIN, G.S., inzh.; GALAKTIONOV, A.A., kand. arkhitektury, red.;
ARSEN'YEVA, Z.N., red.izd-va; MIKHEYEVA, A.A., tekhn. red.

[Installation of linoleum and masticated rubber floors]
Ustroistvo linoleummykh i plastikatnykh polov. Pod red. A.A.
Galaktionova. Moskva, Gosstroiizdat, 1962. 123 p.
(MIRA 15:10)

(Floor coverings)

LUKOSHKINA, L.A., kand. tekhn. nauk; MAKOTINSKIY, M.P., kand. arkh.; MIKHAYLEVSKIY, P.A., inzh.; TSILLI, L.B., kand. arkh.; SHPANOV, I.A., arkh.; Prinimali uchastiye: BOGUSLAVSKIY, A.I., inzh.; GALAKTIONOV, A.A., kand. tekhn. nauk; LIVSHITS, A.M., inzh.; ZHUKOV, K.V., kand. arkh., retsenzent; SOKOLOV, P.N., prof., retsenzent; GURVICH, E.A., red. izd-va; TEMKINA, Ye.L., tekhn. red.

[Catalog of finishing materials and products]Katalog otdelochnykh materialov i izdelii. Moskva, Gosstroiizdat. Pt.4.[Asbestos cement]Asbestotsement. 1961. 36 p. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov. 2. Nauchno-issledovatel'skiy institut slyudy, asbestotsementnykh izdeliy i proyektirovaniya stroitel'stva predpriyatiy slyudinoy promyshlennosti (for Lukoshkina, Mikhaylevskiy).

(Asbestos cement)

GALAKTIONOV, A.A.; SERGEYEVA, Z.V.; KURICHENKO, V.A.; RESHETNIKOVA, L.V.; POGULYAYLO, Z.K.; SUVOROV, V.S.; KRIVOV, M.D.; RASTATUYEV, V.A.; FEDOROVA, Yu.A., red.; SAYTANIDI, L.D., tekhn. red.

[Collection of technologically gronded production norms for mechanized farm work done in shifts]Sbornik tekhnicheski obosnovannykh normativov smennoi proizvoditel'nosti na sel'skokhoziaistvennye mekhanizirovannye raboty. Moskva, Izd-vo MSKh RSFSR, 1962. 231 p. (MIRA 15:9)

1. Russia (1917- R.S.F.S.R.)Ministerstvo sel'skogo khozyaystva. TSentral'naya zonal'naya normativno-issledovatel'skaya stantsiya. 2. TSentral'naya zonal'naya normativno-issledovatel'skaya stantsiya (for all except Fedorova, Saytanidi).

(Agricultural machinery--Production standards)

BLOKHIN, Boris Nikolayevich, prof.; GALAKTIONOV, Aleksandr Alekseyevich, dots.; VOROB'YEV, V.A., prof., retsenzent; KHIGEROVICH, M.I., prof., retsenzent; IVANOV, O.M., dots., retsenzent; RUFFEL', N.A., dots., retsenzent; KOKIN, A.D., retsenzent; ZHELUDKOV, V.I., inzh., nauchnyy red.; LYTKINA, L.S., red.izd-va; KASIMOV, D.Ya., tekhn. red.

[Finishing materials and operations]Otdelochnye materialy i raboty. Moskva, Gosstroiizdat, 1962. 275 p. (MIRA 15:7)

1. Zaveduyushchiy kafedroy "Organicheskiye stroitel'nyye materialy i plastmassy" Moskovskogo inzhenerno-stroitel'nogo instituta im. V.V.Kuybysheva (for Vorob'yev). 2. Kafedra "Stroitel'nyye materialy "Moskovskogo inzhenerno-stroitel'nogo instituta im. V.V.Kuybysheva (for Khigerovich, Ivanov). 3. Kafedra "Tekhnologiya stroitel'nogo proizvodstva "Moskovskogo inzhenerno-stroitel'nogo instituta im. V.V.Kuybysheva (for Ruffel'). 4. Glavnyy inzhener Upravleniya otdelochnykh rabot Glavnogo upravleniya po stroitel'stvu i vosstanovleniyu zheleznodorozhnykh mostov (for Kokin).

(Building--Details)

GALAKTIONOV, A.B.

3(5,6) **PHASE I BOOK EXPLOITATION** SOV/2899

Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki

Prikladnaya geofizika; sbornik statey, vyp. 23 (Applied Geophysics; Collection of Articles, No.23) Moscow, Gostoptekhizdat, 1959. 242 p. 3,500 copies printed.

Ed.: M.K. Polshkov; Exec. Ed.: N.N. Kuz'mina; Tech. Ed.: A. S. Polosina.

PURPOSE: This book is intended for scientific, engineering, and technical personnel of industrial geophysical exploration services.

COVERAGE: This is a collection of 14 articles by various authors on aspects of geophysical exploration. The material treated in the articles may be divided into four categories: the physical properties of rocks in specific geological regions, methods and techniques used in industrial geophysical exploration, concepts in the theory of electrical exploration, and the economics involved in geophysical operations. Specifically, the authors discuss the geologic structures of the central parts of the Russian Platform, southwestern Turkmenia, the West Siberian Plains, the eastern part of the Siberian Platform, and the Minusinsk basins; electrical frequency sounding, neutron logging, gamma spectrometry techniques, and the standard equipment and installations of the geophysical services of the petroleum industry in the USSR. References accompany each article.

Nikolayevskiy, A.A. Density Characteristics of the Geological Profile of the Eastern Part of the Siberian Platform 112

Galaktionov, A.B. Density of Sedimentary Beds of Ustyurt 127

Tarkov, A.P. Nature of the Anomalous Gravitational Field of the Minusinsk Basins 136

Temkin, A.Ya. Methods of Solving Problems in Neutron Logging 141

Kantor, S.A. The Effect of the Diameter of a Borehole on Instrument Readings in Neutron-Neutron Logging 174

Nedostup, G.A., F.M. Prokof'yev, A.I. Kholin, and A.F. Tsitovich. Use of Differential Gamma-Spectrometry in Petroleum Geology 193

Voskoboynik, N.I. The Speed of Electrical Logging in Combined Measurements With an Arbitrary Division of Channels 202

Polyakov, Ye. A. An Equivalent Electrical Schematic for an Electrode 217

Abb, E.A., V.M. Zaporozhets, R.I. Plotnikov, and L.A. Khutsishvili. Some Problems in the Design of a Borehole Neutron Generator 226

Kozlov, P.T. Basic Assets of the Geophysical Services in the Petroleum Industry of the USSR 234

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NEVOLIN, N.V.; GALAKTIONOV, A.B.; SEROVA, A.D.

Geological structure of the Aktyubinsk area of the Ural Mountain region. Prikl.geofiz. no.22:129-156 '59. (MIRA 12:7)
(Aktyubinsk Province--Geology)

GALAKTIONOV, A.B.

Density of sedimentary rocks in Ust'-Urt. Prikl. geofiz. no.23:
127-135 '59. (MIRA 13:1)
(Ust'-Urt--Rocks--Density)

Galaktionov, A.I.

120-6-8/36

AUTHORS: Voykovskiy, B.A., Galaktionov, A.I., Tret'yakova, M.I. and Chudakov, A.Ye.

TITLE: Photometering of Tracks Due to Charged Particles in Photographic Emulsions (Fotometrirovaniye sledov zaryazhennykh chastits v fotoemul'sii)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.6, pp. 38 - 42 (USSR).

ABSTRACT: A photometer is described which can be used to determine the density of a track in a photographic emulsion. A photograph of the apparatus is given in Fig.1 and its principles are as follows. The part of the track under investigation is made parallel to the slit of the photometer. Light which passes through the track objective and then the photometer slit is intercepted by the cathode of a photomultiplier. Depending on the density of the track the output of the photomultiplier falls or increases, as the slit is moved along and parallel to the track. The voltage across the photomultiplier load is then amplified by an amplifier and is applied to the plates of an oscilloscope. An automatic device is incorporated which ensures that the track always lies within the slit. The quantity h/H (where h is the maximum density on the axis of the track and H is the background density) was measured for protons and

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Photometering of Tracks Due to Charged Particles in Photographic Emulsions.

π-mesons as a function of residual range. Comparing the ranges of protons and π-mesons corresponding to the same value of h/H the ratio of the mass of the protons to that of the mesons could be calculated (for ranges between 520 and 1 100, and 3 800 - 7 000 microns for protons and π-mesons, respectively). Figs. 4 and 6 show curves of h/H as functions of range for protons, π-mesons, and τ-mesons. Using the above method, it also is possible to determine the cross-sectional profile of each track. The area under this curve is denoted by S. The following masses were found for the τ-mesons:

$$m_{\tau} = (1\,050 \pm 175)\ m_e \quad \text{(from h/H and the range)}$$

$$m_{\tau} = (985 \pm 120)\ m_e \quad \text{(from S and the range).}$$

The values for the π-mesons are as follows:

$$m_p/m_{\pi} = 6.4 \pm 0.6 \quad \text{(from h/H and the range)}$$

$$m_p/m_{\pi} = 6.6 \pm 0.5 \quad \text{(from S and the range).}$$

Card2/3 It is found that using the "S method" it is easier to separate singly-charged particles of different nature. A measurement of

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otometering of Tracks due to Charged Particles in Photograhic Emulsions.

S will also yield Z for relativistic particles. V. Karpova and V. Sachkov carried out the measurements on the instrument. There are 6 figures and 7 non-Slavic references.

ASSOCIATION:	Institute of Physics imeni P.N. Lebedev Ac.Sc. USSR. (Fizicheskiy Institut im. P.N. Lebedeva AN SSSR)
SUBMITTED:	May 21, 1957
AVAILABLE:	Library of Congress.

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GALAKtionov, A.I.

120-6-9/36

AUTHORS: Voykovskiy, B.A., Galaktionov, A.I. and Tret'yakova, M.I.

TITLE: An Instrument for Measuring the Length and Number of Gaps in Tracks due to Charged Particles in Photographic Emulsions. (Pribor dlya izmereniya dliny i chisla razryvov na sledakh zaryazhennykh chastits v fotoemul'siyakh)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.6, pp. 42 - 45 (USSR).

ABSTRACT: A gapmeter is described which can be used to measure simultaneously the length of a given part of a track due to a charged particle, the number and the total length of gaps (of given length or greater than a given length) between the grains of the emulsion. Curves are given of the differential and integral gap length as functions of range for protons and π-mesons in NIKFI-R emulsions. The instrument works as follows. The microscope stage on which the emulsion is placed can be moved by means of an electric motor. To begin with, the track under investigation is lined up parallel to the direction of motion of the microscope stage. The movement of the stage is transformed into photoelectric impulses which after amplification and shaping are fed into a counter. In one of the eye pieces of the microscope there is a thin wire perpendicular to the track. When the beginning of the part of the track under

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An Instrument of Measuring the Length and Number of Gaps in Tracks Due to Charged Particles in Photographic Emulsions.

investigation coincides with the wire the observer presses a button which switches in the counter which measures the total length of the track. When the wire coincides with the beginning of a gap the observer switches in the counter which measures gap length and automatically counts the number of gaps. After each 100 µ of the track the motor automatically stops and the observer makes a note of the readings of the counters. The motor has a variable speed which can be regulated by the observer e.g. when he comes towards the end of the gap he can slow down the motor. Curves are given of gap length L as a function of range for protons and π-mesons, the total length of the gaps as a function of range for π-mesons, protons and τ-mesons, and the total number of gaps as a function of range for π-mesons, protons and τ-mesons. The following values were obtained:

$m_p/m_\pi = 6.1 \pm 0.3$ (from L and range)

$m_p/m_\pi \approx 6.5$ (from the total length of gaps and range)

m_τ/m_p 0.5 - 0.6 (-ditto-)

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An Instrument of Measuring the Length and Number of Gaps in Tracks due to Charged Particles in Photographic Emulsions.

A. Nomofilom and Ye.A. Brik carried out the measurements on the gap-meter. There are 6 diagrams and 6 references, 2 of which are Slavic.

ASSOCIATION: Physical Institute imeni P.N. Lebedev Ac.Sc. USSR. (Fizicheskiy Institut AN SSSR)

SUBMITTED: April 26, 1957.

AVAILABLE: Library of Congress.

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AUTHORS: Voronkov, A.Yo., Galaktionov, A.I., Murin, I.D., Sukhov, L.V. and Shtranikh, I.V.

TITLE: An Instrument for Automatic Inspection of Nuclear Photo-emulsions by the Television Raster Method. I. Servo Systems

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 2, pp. 63 - 68 + 1 plate

TEXT: The following two types of problems can be solved by using nuclear photo-emulsions:

1) search for the required events (stars and tracks from a given direction and density, etc.) and determining the number of such events in a given volume of emulsion;

2) inspection or scanning of chosen tracks in order to determine their scattering ionisation, etc.

An automatic instrument capable of performing the following operations on photo-emulsions is described:

a) automatic following of a given track in three coordinates

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with continuous reading of the instantaneous coordinates X_1, Y_1, Z_1 and time t necessary for moving to the next coordinates, increments in the angle φ of the direction of the trace during time t and the determination of the multichannel ionisation spectrum of the trace;
b) automatic measurement of multiple scattering of a given track by the coordinate method with the reading of the instantaneous first, second and third differences, length of a cell, time t taken to move along the cell, determination of the spectrum of the positive and negative second differences and the ionisation spectrum of the track;
c) determination of the tracks in a given direction with automatic following of these tracks.
Only the servo system of the equipment is described, while the apparatus for recording the output data such as coordinates and time is not mentioned. The system is based on the use of the video signals which are obtained during the scanning of a section of a photo-emulsion, which is seen in the field of a projection microscope and is projected

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on the photocathode of a television-camera tube (type ЛИ-101 (LI-101)). In order to obtain the maximum ratio of track signal/background noise the slots which are usually employed in such equipment were eliminated (Refs. 1-3). The system is based on the principle of digital recording. Each field of the television picture is counted as the number of grains in a track; the deviation of the track from its central position in the field of vision of the camera tube is similarly recorded. On this basis it was possible to design an instrument capable of tracking only one grain (in the absence of background grains) which corresponds to the signal/noise ratio of about 1/400 over a segment of track 200 μ long. The functioning of the system is as follows. Of all these signals, from each line of the television reproduction of the picture, only those are selected which enter the so-called control zone a which is from 2 - 24 μ wide (depending on the chosen width of the zone and magnification of the microscope). Initially, the investigated track is introduced into this zone. The control zone is situated

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in the middle of the lines and is divided into four sub-zones, I - IV; secondly, horizontally, it is divided into eight equal lanes, 1-8, having a width of 0.25 - 0.27 μ (and minimum duration of 0.25 μs). The signals of the television picture from the camera 1 (Fig. 2 gives the block diagram of the equipment) are applied to the amplifier 2, where they are shaped by an aritifical line 3 whose length can be adjusted from 0.1 - 0.5 μs. The signals then pass through a fast limiting circuit 4 and are applied to a control unit 5. Simultaneously, these signals can be observed on the screen of a control television receiver 26. The deviation of a track from its so-called central position with regard to the four sub-zones is determined in the control unit 5. The deviations of the track from its central position can be of three kinds:

a) lateral deviations α;
b) angular deviations β, and
c) mixed deviations γ, where both the lateral and angular deviations are observed.

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The deviation k is expressed as the number of pulses corresponding to the number of the lanes ℓ multiplied by the number of lines n in a sub-zone which intersect the elements of a track, i.e. $k = \ell m$. The television system is based on interlaced scanning with 50 fields per second, the full number of lines being 567. For purely technical reasons, only two-thirds of all the lines of each are used. This amounts to about 94 lines per sub-zone for a field so that for the maximum detuning for a thick trace in one sub-zone the deviation is k = 378 pulses. The deviation of a track from its central position in the control zone is determined separately for all four sub-zones, for each third field, by means of four counter circuits 6 - 9 of the preliminary dividers and finally by means of four storage interpolators 10 - 13 (see Fig. 2). The logical control circuit 14 , which is coupled to 10 - 13 , produces a mismatch signal when the track deviates from its central position; the signal is then applied to the servo mechanisms of the microscope which eliminate the "mismatch". The

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equilibrium state is characterised by a minimum and equal count from all four sub-zones for each third field, which corresponds to the position of the track between the lanes 4 and 5 . The microscope is МБИ-8 (MBI-8) and it is furnished with seven collector-type motors Д2Р (D2R)) which operate seven control screws through suitable reduction gears and reversible magnetic clutches. The functions of these control organs are as follows (Fig. 2): M_1 and M_2 - displacement along the coordinates X_1 and Y_1 ; M_3 - displacement along the coordinate X_2 ; M_6 - displacement along the coordinate Z_2 (micrometer drive for the focusing); M_4 - displacement along the coordinate Y_2 or the displacement of the microscope eyepiece; M_5 - rotation of the Dovey prism; M_7 - positioning of the microscope table. For convenience, all the motors can be manually operated by means of suitable

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keys. The deviation of a track from its central position (α, β, or γ) results in the rotation of the Dovey prism due to the signals obtained from the logic circuit 14 ; this also results in the rotation of the sine-cosine potentiometer 29, whose output voltage controls the speed of the motors M_1 and M_2 via the control circuits 16 and 15 . A special shutter placed on the axis of the prism controls the motion of the drive screws by means of magnetic clutches which are operated by photo-diodes and relays. The motors employed have a comparatively small speed range (500 to about 7 000 r.p.m.). Consequently, at certain angular positions φ_2 of the prism which correspond to the predominant direction of motion along one of the coordinates X_1 or Y_1 , the system automatically produces a discrete displacement of the track along one of the coordinates by means of a magnetic clutch operating at a small constant velocity. The above deficiency of the motors limits the measurement of the track-

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displacement velocities to 30 - 160 μ/sec. The accuracy and the stability of the automatic following of a track is increased by introducing a feedback path into the system which corrects the velocity ratio of the motors M_1 and M_2. The feedback loop employs the mismatch error signal from the logical circuit 14. The system operates as a switching servo mechanism with discontinuous control proportional to the error signal. If this system is used for the automatic measurement of the scattering or coordinates its operating speed along a track can reach 150 μ/s. The error in the measurement of the second differences is ± 0.03 μ. When used in the simultaneous measurement of scattering and ionisation, the speed is 20 μ/s. The authors make acknowledgment to N.A. Dobrotin, I.M. Frank, I.Ya. Barit for cooperation and to V.A. Ryabov, G.I. Yegorov and their collaborators of the Physics Institute of the AS USSR, who took part in this work.

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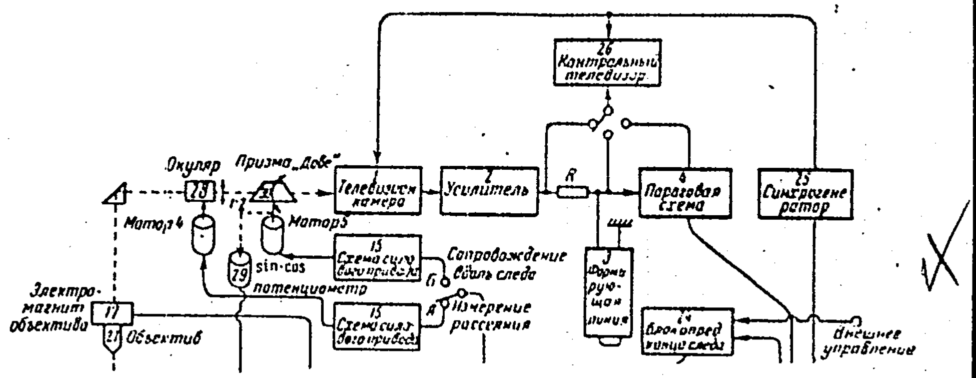
An Instrument for ....

There are 4 figures and 7 references: 3 Soviet and 4 non-Soviet.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute of the AS USSR)

SUBMITTED: April 25, 1960



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L 36316-66 EEC(k)-2/EWT(d)/EWP(1) IJP(c) BB/GG/GD

ACC NR: AT6012892 SOURCE CODE: UR/0000/65/000/000/0128/0146

AUTHOR: Galaktionov, A. I.

59
B+1

ORG: None

16

TITLE: The rate of information processing by man-operators in solving practical problems of technical diagnosis

SOURCE: Sistema chelovek i avtomat (Man-automaton systems). Moscow, Izd-vo Nauka, 1965, 128-146

TOPIC TAGS: information theory, information processing, bionics, man machine ~~communication~~ relation

ABSTRACT: The author discusses three classes of problems. Quantitative evaluation of a given class of events is made more accurate. This given class of events is composed of $T_t=F(n)$ events in a group; n parameters in the event; n parameters in a group of interrelated events; n groups in a set. The rate of information processing by man under real conditions is studied. A formula is given for determining the percent of incorrect reactions.

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ACC NR: AT6012892

$$\delta \% = F_1(D);\ C_{rip} = F_2(T_{work});\ C_{rip} = F_3(N);$$

$$L = F_4(D);\ TR = F_5(D)$$

Where C_{rip} is the rate of information processing by man; D is the density of the stream of information; T_{work} is work time; N is the presence of irrelevant information; L the informational load capacity of man as a function of time; TR is time redundancy. Factors were considered which affect the rate of information processing. This was done to determine the quantitative coefficients which are necessary for calculating the rate of processing. Orig. art. has: 9 figures, 2 tables.

SUB CODE: 05 / 09 / SUBM DATE: 02Aug65

Card 2/2

GALAKTIONOV, A.S.

USSR.

2181. Sectionalizing in electric system connections. 621.311.1 : 621.316.1
A. S. GALAKTIONOV. *Elekt. Stantsii*, 1954, No. 9, 30–4. In Russian.

Sectionalizing of the circuits of stations, substations and supply systems is necessary in order to separate faulty sections of the system in case of emergency. Typical stations and network connections are discussed with respect to automatic connection of reserve supply, automatic load shedding due to frequency drop, with some general notes on the co-ordination of the measures for increasing operational flexibility of the supply system with the relay protection system.

F. BUSINGER

GALAKTIONOV, A. S.

AID P - 3513

Subject : USSR/Power Eng

Card 1/2 Pub. 26 - 7/30

Author : Galaktionov, A. S., Eng.

Title : Establishing an efficient distribution of reactive loads in a power system represented by one equivalent power station

Periodical : Elek. sta., 9, 24-30, S 1955

Abstract : The author discusses the necessity of having an efficient distribution of the reactive load among power plants, in order to achieve minimum losses. The computation of the reactive load is presented in a mathematical analysis, based on the assumption that the individual power plants are combined into an equivalent generating center with a radial distribution system. The establishing of the degree of effectiveness of the load and the putting into operation of synchronous condensers at substations are also analyzed. Seven diagrams.

AID P - 3513

Elek. sta., 9, 24-30, S 1955

Card 2/2 Pub. 26 - 7/30

Institution : None

Submitted ; No date

GALAKTIONOV, A.S.

ZEYLIDZON, Ye.D., inzhener; ALEKSANDROV, I.N., inzhener; DERYUGIN, F.F., inzhener;
GALAKTIONOV, A.S., inzhener; RYVKIN, O.L., inzhener; KUCHERUK, A.Ye.,
inzhener; RAKOVICH, A.M., inzhener.

Simplification of relay protection. Elek.sta. 27 no.2:40-48 F '56.
(MLRA 9:6)

1.Tekhnicheskoye upravleniye Ministerstva elektrostantsii (for Zaylidzon)
2.Belorussenergo (for Aleksandrov).3.Chelyabenergo (for Deryugin).
4.Lenergo (for Galaktionov, Rybkin).5.L'vovskiy enrgokombinat (for Kucheruk, Rakovich).

(Electric relays)

MEL'NIKOV, G.D., inzh.; ZEYLIDZON, Ye.D., inzh.; GALAKTIONOV, A.S., inzh.;
LEONOV, S.A., inzh.; SHLOPOV, Ye.P., inzh.

Certain problems in the structure of dispatcher control in power systems. Elek.sta. 28 no.12:59-63 D '57. (MIRA 12:3)
(Power engineering)

GALAKTIONOV, B.V.; DOLMATOVA, K.A.; LARIONOV, M.M.

Electron temperature and conductivity of a plasma in a high-current toroidal discharge. Zhur. tekh. fiz. 34 no.8:1533-1535 Ag '64. (MIRA 17:9)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

L 12832-65 EWT(1)/EWG(k)/EWT(m)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2
Pz-6/Po-4/Pab-10/Pi-4 IJP(c)/BSD/AS(mp)-2/ASD(d)/AFWL/AEDC(b)/ASD(p)-3/ASD(a)-5/
ASD(f)-2/AFETR/SSD/ESD(gs)/ESD(t)/SSD(b) AT
ACCESSION NR: AP4045288 S/0057/64/034/009/1718/1720

AUTHOR: Galaktionov, B.V.; Dolmatova, K.A.; Larionov, M.M.

8

TITLE: On the ratio of the temperature of the ion and electron components of the plasma in the "alpha" installation

21 19

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.9, 1964, 1718-1720

TOPIC TAGS: plasma, ion temperature, electron temperature, plasma oscillation/ Alpha installation

ABSTRACT: The present authors (ZhTF 34,1964;Sb."Diagnostika plazmy".Gosatomizdat, M.1963) have measured electron and ion temperatures in the plasma of the "alpha" installation with the aid of a multi-channel electrostatic analyzer. They confirm the earlier view that the ion temperature exceeds the electron temperature, but the ratio of the ion to the electron temperature was found to be considerably smaller than had been at first supposed, the ratio being, namely, between 1.5 and 2. The relaxation time for temperature equilibration by ion-electron collision is estimated to be 10^{-5} sec, and it is found that a power of about 1 MeV/sec is required to maintain the observed temperature difference. Fluctuating electric fields with per-

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ACCESSION NR: AP4045288

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iods of the order of 10^{-5} sec have been observed in discharges of the type discussed (W.M.Burton, E.P.Butt, H.C.Cole, A.Gibson, D.W.Mason, R.S.Pease, K.Whiteman and R.Wilson, Conference on research in the fields of plasma physics and controlled nuclear synthesis. Report C-10/60. Saltzburg, 1961), and it is concluded that the observed difference between the ion and electron temperatures can be explained by heating of the ions by these fluctuating fields and exchange of energy between ions and electrons through collisions. "In conclusion, the authors express their deep gratitude to V.Ye.Golant for his constant interest in the work and for discussing the results, and also to A.M.Timonin, K.A.Sorokin, V.P.Kovalenko and the whole group of coworkers of the "alpha" installation for assistance in organizing the measurements." Orig.art.has: 1 formula and 1 table.

ASSOCIATION: Fizkio-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 06Apr64 ENCL: 00

SUB CODE: ME NR REF SOV: 007 OTHER: 001

2/2

GALAKTIONOV, A.T.

Elektrosvarshchik [Electric welder]. Moskva, Mashgiz, 1952. 256 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 2, May 1953

UZYUMOV, P.N., gazorezchik; GALAKTIONOV, A.T., kandidat tekhnicheskikh nauk, redaktor; SPESHKOV, ~~V.V., inzhener~~, retsenzent; DUGINA, N.A., tekhnicheskiy redaktor.

[An aid for the gas cutter] V pomoshch' rabochemu-gazorezchiku. Pod red. A.T.Galaktinova. Moskva, Gos. nauchno-tekhn. izd-vo mashinstroit. i sudostroit. lit-ry, 1953. 28 p. (MIRA 7:9)
(Oxyacetylene welding and cutting)

GALAKTIONOV A.T.

AKHUN, A.I.; KAGANOV, N.L., kandidat tekhnicheskikh nauk, retsenzent; SERGEYEV, I.P., inzhener, retsenzent; GALAKTIONOV, A.T., kandidat tekhnicheskikh nauk, redaktor; ARZAMASTSEV, D.A., kandidat tekhnicheskikh nauk, redaktor; STEPANOV, V.G., kandidat tekhnicheskikh nauk, redaktor.

[Contact electric-welding machines] Kontaktnye elektrosvarochnye mashiny. Sverdlovsk, Gos. nauchno-tekhn. izd-vo mashinostroit.i sudostroit. lit-ry [Uralo-Sibirskoe otd-nie], 1953. 310 p. (MLRA 7:6)

1. Kafedra svarki MVTU imeni N.E.Baumana (for Kaganov, Sergeyev). 2. Uralmashzovod (for Stepanov).
(Electric welding)

GALAKTIONOV, A.T., kandidat tekhnicheskikh nauk; PATSKEVICH, I.P.
STADNIKOV, G.D.: LUGINA, N.A., tekhnicheskiy redaktor.

[Electric welder; handbook for workers] Elektrosvarshchik; spravochnoe posobie dlia rabochikh. Izd.2-3, dóp. i perer. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 303 p.
(Electric welding) (MLRA 8:8)

GALAKTIONOV, Andrey Timofeyevich

[Aid to the welder of the machine-tractor station] V pomoshch' svarshchiku MTS. Moskva, Mashgiz, 1955. 123 p. (MLRA 9:11)
(Welding)

GALAKTIONOV, A.T., kandidat tekhnicheskikh nauk.

Strength of welded joints in alkaline media. Trudy Ural. politekh. inst. no.62:56-59 '56. (MLRA 10:2)

(Welding--Testing) (Corrosion and anticorrosives)

MASLOV, Yuvenaliy Aleksandrovich; TORSHILOV, V.M., inzh., retsenzent;
GALAKTIONOV, A.T., kand.tekhn.nauk, red.; SARAFANNIKOVA, G.A.,
tekhn.red.

[Air and electric arc cutting of metals] Vozdushno-elektrodugovaia
rezka metallov. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.
lit-ry, 1957. 38 p. (MIRA 11:3)
(Metal cutting, Electric)

KUZNETSOV, Anatoliy Pavlovich; GALAKTIONOV, A.T., kand.tekhn.nauk, retsenzent;
DUGINA, N.A., tekhn.red.

[Assembling and welding of metal structures] Sborka i svarka
metallicheskikh konstruktsii. Izd. 2-oe, perer. i dop. Moskva,
Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 224 p.
(Machinery industry) (MIRA 11:3)
(Welding)

GALAKTIONOV, A. T., Cand. Tech. Sci.

"Progressive Welding Methods Used by Ural Plants" p. 573-580 in book Increasing the Quality and Efficiency of Machinery, Moscow, Mashgiz, 1957, 626pp.

MIKHAYLOV, G.P.; MASLOV, Yu.A.; FOFONOV, A.A.; GALAKTIONOV, A.T.; BOBKOV, Ye.I.; NIKONOV, I.P.; DENISOV, Yu.A.; SHAPKOV, B.K.; SHATOV, N.Ya.; MIKHAYLOV, S.I.; PETUNIN, I.V.; KHOVANETS, V.K.; KOCHEVA, G.I.; LABUTINA, E.A.

In memory of A. I. Akhun; an obituary. Svar.proizv. no.12:46 D '57.
(MIRA 11:1)

1.Sotrudniki Kafedry "Oborudovaniye i tekhnologiya svarochnogo proizvodstva" Ural'skogo politekhnicheskogo instituta imeni S.D. Kirova.

(Akhun, Alekdandr Il'ich, d. 1957)

AKHUN, Aleksandr Il'ich; ZAKHAROV, B.P., inzh., red.; GALAKTIONOV, A.T., kand.tekhn.nauk, red.; DUGINA, N.A., tekhn.red.

[Contact electric welding machines] Elektrosvarochnye kontaktnye mashiny. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1958. 48 p. (Nauchno-populiarnaia biblioteka rabochego-svarshchika, no.8) (MIRA 12:2)

(Electric welding--Equipment and supplies)

GALAKTIONOV, Andrey Timofeyevich; YES'KOV, K.A., dotsent, red.; DUGINA, N.A., tekhn.red.

[Equipment for gas welding and cutting] Oborudovanie dlia gazovoi svarki i rezki. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1959. 35 p. (Nauchno-populiarnaia biblioteka rabochego-svarshchika, no.7). (MIRA 13:5)
(Gas welding and cutting)

RUDAKOV, Aleksandr Semenovich; GALAKTIONOV, A.T., kand.tekhn.nauk, retsenzent; YES'KOV, K.A., dotsent, red.; DUGINA, N.A., tekhn.red.

[Resistance welding] Kontaktnaia svarka. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 61 p. (Nauchno-populiarnaia biblioteka rabochego-svarshchika, no.13). (MIRA 13:5)

(Electric welding)

25(1) SOV/135-59-3-17/24

AUTHORS: Galaktionov, A.T., Candidate of Technical Sciences, and
Fofanov, A.A., Engineer

TITLE: Welding Wire in the Wire-Drawing Process (Svarka provoloki v volochil'nom proizvodstve)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 3, pp 37-38 (USSR)

ABSTRACT: Design defects of the wire welders "ASP-3", "ASP-10", "ASMP-1" employed for connecting the wire ends in the wire-drawing process are the cause of the frequent wire ruptures when drawing high-carbon and alloy steel wire. The authors point out that the spring drive of the upsetting mechanism of these welders produces high pressure in the beginning of the upsetting.
A new electromagnetic spring drive, illustrated by a circuit diagram (Fig. 1), was installed in an "ASP-3" welder and eliminated the trouble. Another upsetting drive device, of

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SOV/135-59-3-17/24

Welding Wire in the Wire-Drawing Process

cam design (Fig. 2), was installed in an "ASIF-25" welder for thick wire (concrete reinforcement wire) and eliminated the fault there. There are 2 diagrams and 1 table.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S.M. Kirova (The Urals Polytechnical Institute imeni S.M. Kirov)

Card 2/2

SOV/133-59-4-27/32

AUTHOR: Galaktionov, A.T., Candidate of Technical Sciences, and Fofanov, A.A., Engineer

TITLE: Butt Welding of High Carbon and Alloy Wire (Stykovaya svarka vysokouglerodistoy i legirovannoy provoloki)

PERIODICAL: Stal', 1959, Nr 4, pp 374-377 (USSR)

ABSTRACT: On the proposal of the Beloretsk Steel-Wire Works, the Ural Polytechnical Institute investigated causes of breakage of butt welded wire during drawing and developed methods of producing high quality joints for wire 1.5 to 6 mm in diameter from steels U9A, U10A, 65G, 1Kh18N9T and alloys Kh15N60 and Kh20N80. The quality of the welded joints was determined on the basis of results of mechanical testing for strength, number of bends, hardness of the joint on neighbouring zones, technological drawing tests and metallographic studies. The following causes of breaks were established: 1) the presence of oxides in the joint (Fig 1 and 2); 2) deviation of the hardness and strength of metal in the joint and neighbouring zone from those of the main metal; 3) overheating of the metal in the joint with the

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SOV/133-59-4-27/32

Butt Welding of High Carbon and Alloy Wire

formation of a structure of low plasticity and 4) weakening of the point of weld during the removal of burr. The dependence of mechanical properties of welded joints on the value of specific pressure applied during welding is shown in Fig 3 and the comparison of the results of mechanical and technological testing of welded joints of an alloy wire (1Kh18N9T) 6 mm in diameter welded by resistance and by melting in the table. It was found that the existing butt welding apparatus of low power cannot satisfy requirements of the modern wire drawing industry. For wire above 4 mm in diameter, it is necessary to design contact butt welding automatic equipment which welds by melting. Such equipment should be able to remove burrs directly after welding in hot plastic state and thermally treat the joint according to predetermined practice with retention at 500 to 600°C during cooling (to prevent hardening). Wire below 4 mm in diameter should be welded with an apparatus which can apply a small specific pressure at the beginning of welding (0.2 to 0.3 kg/mm2)

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SOV/133-59-4-27/32

Butt Welding of High Carbon and Alloy Wire

sharply increasing it at the end of the process. There are 5 figures and 1 table.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

Card 3/3

18(7) SOV/125-59-7-4/19

AUTHOR: Galaktionov, A.T., and Kofanov, A.A.

TITLE: Research on Butt-Welding of Carbon-Steel and Alloyed Wire

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 7, pp 21-26 (USSR)

ABSTRACT: The process of wire drawing imposes exceptionally high requirements on the butt-welded wire joints as regards their strength, plastic properties and absence of defects. If the strength of the joint is inferior to that of the base metal used, or if the joint is not plastic enough - both these factors may entail the wire breakage during the process of drawing. In this connection tests were conducted at the Ural Polytechnic Institute with a view to establishing the best method for butt-welding of wire 6 mm in diameter. It is to be noted that wire of this size is used as primary material for wire drawing, and can serve as a general example in judging the quality of welded joint. In order to find out the best conditions under which

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SOV/125-59-7-4/19

Research on Butt-Welding of Carbon-Steel and Alloyed Wire

the above mentioned kind of welding should be performed, the effect of the different parameters was taken in consideration used in the process of welding, on the mechanical properties and structure of the welded joint. In the experimental stage, two methods of welding were tested: the flash-butt welding and the resistance welding. In the course of research it was established that the flash-butt welding is superior to the resistance welding, as it particularly improved the plastic properties of the weld. That is why it is necessary to construct automatic welders for flash-butt welding. These welders must be equipped with special designs for removing the remaining flash material immediately upon completion of the welding process, while the wire is still hot and plastic. The heat-affected zone at the flash-butt welding amounts to 5-8 mm, which is far less than at the resistance welding. The metal hardness in the heat-affected zone

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SOV/125-59-7-4/19

Research on Butt-Welding of Carbon-Steel and Alloyed Wire

approaches after the heat-treatment to the hardness of the base metal. The heat-treatment of welds obtained by both methods - flash and resistance - was the same. However, the steel test-pieces welded by the butt flash underwent breakage at a distance of 7-8 mm from the weld, whereas the pieces welded by resistance method were broken at the weld itself. There are 2 graphs 1 table, 1 diagram and 2 pictures.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (The Ural Polytechnic Institute imeni S.M. Kirov)

SUBMITTED: October 13, 1958

Card 3/3

18(5), 25(5) SOV/125-59-5-12/16

AUTHOR: Galaktionov, A.T., Candidate of Technical Sciences

TITLE: Training of Welders. Letter to the Editors

PERIODICAL: Avtomaticheskaya svarka, 1959, Vol 12, Nr 5 (74) pp 93-94 (USSR)

ABSTRACT: The author states, that far too little is done to train welders. The factory UZTM imeni Ordzhonikidze has a special welding department, but in the factory "Uralelektroapparat" the welding office belongs to the department of the chief metallurgist. In the Magnitogorsk Metallurgic Factory the welding has to be done by engineers of other branches. The reason for those inconveniences is, that welding specialists in the Ural area are only trained at the Nizhniy Tagil Technical College. There are about 20 - 22 specialists graduating each year. The author demands 250 - 300 new welding specialists a year for the Ural area. He states, that polytechnical institutes at Ural'sk and Chelyabinsk could take over the training of welding

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SOV/125-59-5-12/16

Training of Welders. Letter to the Editors

specialists.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (Ural'sk Polytechnical Institute imeni S.M. Kirov)

Card 2/2

BAZHENOV, Ivan Arkad'yevich; KURYSHEV, Vasiliy Yevgen'yevich; GALAKTIONOV, A.T., kand.tekhn.nauk, retsenzent; DUGINA, N.A., tekhn.red.

[Kerosene cutter] Kerosinorezchik. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1960. 65 p. (MIRA 13:5)
(Gas welding and cutting) (Kerosene)

GALAKTIONOV, A.T.; DENISOV, Yu.A.; KOPYTOV, G.T.; MASLOV, Yu.A.; NIKONOV, I.P.; PETUNIN, I.V.; KOCHEVA , G.N.; KUZNETSOV, A.P.; LELEKO, N.M.; RAZIKOV, M.I.; SPESHKOV, V.V.; STEPANOV, B.V., STEPANOV, V.V.; kand. tekhn. nauk; SHELOMOV, B.Ye.; YUNYSHEV, G.P.; YES'KOV, K.A., dots., retsenzent; BAKSHI, O.A., dots., retsenzent; BEREZKIN, P.N., dots., retsenzent; PATSKEVICH, I.R.,dots., retsentzent; RUDAKOV, A.S., dots., retsenzent; FIZHBEYN, N.B., inzh., retsenzent; KHRUSTALEV, L.Ya., inzh., retsenzent; KRUTIKHOVSKIY, V.G., inzh., red. BOBROV, Ye.I., kand. tekhn. nauk, red. DUGINA, N.A., tekhn. red.

[Welding handbook] Spravochnik rabochego-svarshchika. Pod red. V.V.Stepanova. Moskva, gos. nauchno-tekhnizd-vo mashinostroit. lit-ry, 1960. 640 p. (MIRA 14:6)

(Welding)

GALAKTIONOV, Andrey Timofeyevich, kand. tekhn. nauk; PATSKEVICH, Ivan
Romanovich; STADNIKOV, Georgiy Dem'yanovich; DUGINA, N.A.,
tekhn. red.

[Electric welding; a welder's handbook] Elektrosvarshchik;
spravochnoe posobie dlia rabochikh. Izd.3., dop. i perer.
Moskva, Mashgiz, 1961. 392 p. (MIRA 15:2)
(Electric welding)

MAKURIN, Pavel Ivanovich; GALAKTIONOV, A.T., kand. tekhn.nauk, retsenzent; KRUTIKHOVSKIY, V.G., inzh., red.; DUGINA, N.A., tekhn. red.

[Handling and use of gas cylinders]Ekspluatatsiia gazovykh ballonov. Moskva, Mashgiz, 1962. 111 p. (MIRA 15:10)
(Gas cylinders)

GALAKTIONOV, A.T., kand. tekhn. nauk; SVIT, P.P., inzh.; FOFANOV,
A.A., kand. tekhn. nauk

Modernizing the ASIF-25 machine. Svar. proizv. no.8:38-39
Ag '63. (MIRA 17:1)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova.

L 40964-66 EWT(m)/EWP(j)/T IJP(c) RM/WW

ACC NR: AR6016969 (A) SOURCE CODE: UR/0081/65/000/024/S073/S073

23

B

AUTHOR: **Galaktionov, A. V.**

TITLE: The effect of atmospheric factors on the mechanical properties or foam plastic 16 FL-1 15

SOURCE: Ref. zh. Khimiya, Abs. 24S508

REF SOURCE: Sb. Inzh. konstruktsii. Doklad k XXIII Nauchn. konferentsii. Leningr. inzh.-stroit. in-ta. L., 1965, 199-202

TOPIC TAGS: foam plastic, phenol formaldehyde resin, mechanical property, atmospheric humidity, atmospheric temperature, moisture resistance / FL-1 foam plastic

ABSTRACT: Investigations of the effect of atmospheric factors on mechanical properties of foam plastic FL-1 confirmed results about the high resistance of foam plastics based on phenol-formaldehyde resins 15 of the resole type to increased humidity and temperature of the surrounding atmosphere. Intermittent submersion in water with subsequent drying also did not affect properties of the foam plastic. N. L. [Translation of abstract].

SUB CODE: 11, 20

Card 1/1 mLP

GALAKTIONOV, Al'bert Vital'yevich; DCOS, A.V., red.

[Mechanical properties of the new building material, FL-1 foam plastic] Mekhanicheskie svoistva novogo stroitel'nogo materiala - penoplasta FL-1. Leningrad, 1965. 21 p. (MIRA 18:10)

22779
S/057/61/031/005/010/020
B104/B205

26.2321

AUTHORS: Ovsyannikov, V. A., Bulyginskiy, D. G., Galaktionov, B. V., and Dolmatova, K. A.

TITLE: Method of measuring the temperature of plasma in systems with magnetic plugs. I. The electron model

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 5, 1961, 577-581

X

TEXT: The authors describe a method that can be used to measure the velocity distribution of both electrons and ions in plasma. In test installations with magnetic fields of plug configuration, the plasma particles perform oscillations between the plugs. If an additional coil is installed near one of the plugs, which compensates the "plug" magnetic field for a short time, the plasma can escape from the traps in longitudinal direction. If an electrostatic analyzer is installed in the path of the plasma, it is possible to measure the energy distribution of the released plasma portion. The maximum permissible time for opening the plug is determined, during which the magnetic trap is not destroyed. The maximum opening time is 1 - 2 µsec. A retarding grid or collector is used

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X

S/057/61/031/005/010/020
B104/B205

Method of measuring...

to measure the released plasma portion. This method can only be used for studying the "longitudinal" temperature of plasma. The "transverse" temperature can be measured by opening the magnetic plug partly, even though with less accuracy. In this way, those particles are measured the trajectories of which form an angle of 0 up to a certain value with the longitudinal axis of the traps. The experiments of the authors were intended to find out whether it is possible to open the magnetic plug for so short a time and to show that the energy distribution of the electrons is not affected by opening the plug. In the block diagram shown in Fig. 1, the electron trajectory forms an angle of 75° with the field. Previous experiments have shown that 1) it is possible to open the plug for a time that is short compared to the cycle of magnetic compression in thermonuclear devices of the "slow" type; 2) a pulse analysis of the energy distribution of the particles is possible. In this analysis, a retarding pulse with a steep leading edge is applied to the above-mentioned grid. The amplitude of the pulse is large enough to slow down even the fastest particles. Academician B. P. Konstantinov and V. Ye. Golant, Candidate of Physical and Mathematical Sciences, are thanked for discussions and interest in the work. N. I. Ionov is mentioned. There are 4 figures

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and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Institute of Physics and Technology imeni A. F. Ioffe, AS USSR, Leningrad)

SUBMITTED: March 24, 1960

Legend to Fig. 1: 1) Rectifier; 2) power supply of the additional coil; 3) generator of retarding pulses; 4) ГИС-2 (GIS-2); 5) starting device; 6) oscilloscope.

S/057/63/033/002/008/023
B108/B186

AUTHORS: Bulyginskiy, D. G., Galaktionov, B. V., Dolmatova, K. A., and Ovsyannikov, V. A.

TITLE: A method of measuring the energy spectrum of the particles escaping from a plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 2, 1963, 183-190

TEXT: The energy spectrum of the electrons and ions escaping from a plasma was studied using a vacuum device with corkscrew geometry of the magnetic field. The plasma pulses were produced by the discharge of a capacitor. The analyzer, three plane grids and the collector, were in a steel cylinder closed by a grid diaphragm to reduce the plasma concentration. The measurements were made by the delayed-potential method described by V. A. Ovsyannikov et al. (ZhTF, 31, 5, 577, 1961). The maximum energy of the electrons increased with increasing magnetic field strength, equaling about 50 ev at 1000 oe. The ion energy was independent of the magnetic field strength, reaching a maximum of some 200 ev (15 kv at the capacitor, $1-2\cdot10^{-4}$ mm Hg). Some of the results of this paper were reported at the
Card 1/2

International Conference on Research in the Field of Plasma Physics and Controlled Nuclear Fusion, Salzburg, 1961. There are 10 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: February 12, 1962

ACCESSION NR: AT4025315 S/0000/63/000/000/0247/0255

AUTHORS: Galaktionov, B. V.; Dolmatova, K. A.

TITLE: Use of the retarding potential method for the study of the energy distribution of charged particles in the 'Alpha' installation

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 247-255

TOPIC TAGS: plasma research, discharge plasma, charged particle distribution, electron energy, ion energy

ABSTRACT: A new type of analyzer, essentially an isolated probe introduced into the plasma, was developed for the determination of the energy distribution of plasma charged particles. The particle energy connected with the axial velocity component in a diaphragm is analyzed with the aid of a retarding potential applied to the analyzing grid. The apparatus was used to determine the dependence

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ACCESSION NR: AT4025315

of the energy distribution of the ions and electrons on the discharge parameters (capacitor-bank voltage, hydrogen pressure in the liner, dependence of the ion energy on the distance to the liner). The operation and the characteristics of the equipment are described. The measurements lead to the following conclusion: 1. The energy distribution of the charged particles from the "Alpha" apparatus plasma is close to Maxwellian in the energy range up to 400 eV. 2. The measured temperature of the ion component of the plasma depends on the discharge parameters and on the distance from the liner wall, and ranges from 20 to 130 eV, increasing with increasing distance from the liner and with decreasing pressure. 3. The measured electron temperature has the same dependence on the discharge parameters, and ranges from 40 to 100 eV. The electron temperature and its pressure dependence agree with the values determined from the noise temperature (M. M. Larionov, paper C. N.-10/24, Salzburg Conference, 4--9 September 1961), but disagree with the values obtained spectroscopically (A. N. Zaydel' et al, Zh. tekhn. fiz. v.

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ACCESSION NR: AT4025315

33, 200, 1963). Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: None

SUBMITTED: 19Oct63 DATE ACQ: 16Apr64 ENCL: 01

SUB CODE: ME, NP NR REF SOV: 005 OTHER: 004

Card 3/3

ACCESSION NR: AP4042946 S/0057/64/034/008/1533/1535

AUTHOR: Galaktionov, B.V.; Dolmatova, K.A.; Larionov, M.M.

TITLE: On the electron temperature and conductivity of the plasma in a high-current toroidal discharge

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.8, 1964, 1533-1535

TOPIC TAGS: plasma conductivity, electron temperature, hydrogen plasma

ABSTRACT: The authors have measured the conductivities and electron temperatures of hydrogen plasmas in the "Alpha" installation. The electron temperatures were determined from the probe characteristics of a three-grid electrostatic analyzer positioned with its axis parallel to the magnetic field. Observations were made with both of the two possible orientations of the probe with respect to the electron current. The thermal velocities of the electrons were found to be much greater than their average velocity. The electron temperatures decreased with increasing hydrogen pressure from 40 eV at 4 x 10^{-4} mm Hg to 20 eV at 16 x 10^{-4} mm Hg. The electron temperatures were also determined from the microwave noise level in the 3 to 12 mm wavelength region with the assumption that this noise represents black body radia-

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ACCESSION NR: AP4042946

tion at the electron temperature. The results were in satisfactory agreement with the probe measurements, being from 10 to 30% lower. The conductivity of the plasma was determined experimentally from the current and the emf in the toroidal discharge tube, and it was calculated from the electron temperature by the $T^{3/2}$ law. The measured conductivities were much less (by about a factor 20 at 4×10^{-4} mm Hg) than the calculated, and they increased with increasing pressure. A similar discrepancy has been found with the "Zeta" installation by W.M.Burton, E.R.Butt, H.C.Cole, A. Gibson, D.W.Mason, R.S.Pease, K.Whiteman and R.Wilson (Conference on Plasma Physics and Controlled Nuclear Synthesis,Report CN 10/60, Salzburg,1961). The reason for this discrepancy is not known, but it is suggested that turbulent motion of the plasma, not taken into account in the derivation of the $T^{3/2}$ law, may be involved. It is concluded that one cannot reliably determine electron temperatures from measurements of plasma conductivities. Orig.art.has: 1 formula and 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR,Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 17Oct63

SUB CODE: ME

NR REF SOV: 006

ENCL: 00

OTHER: 001

GALAKTIONOV, B.V.; DOLMATOVA, K.A.; LARIONOV, M.M.

Relationship between the ion and electron components of a plasma in the Alpha plant. Zhur. tekh. fiz. 34 no.9:1718-1720 S '64. (MIRA 17:10)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

L 26971-65 EWT(1)/EPA(sp)-2/EWT(m)/T/EEC(t)/EPA(w)-2/EWA(m)-2 Pz-6/Po-4/
Pab-10/Pi-4 IJP(c) AT

ACCESSION NR: AP5003260 S/0057/65/035/001/0172/0174

64
4
B

AUTHOR: Galaktionov, B.V./ Larionov, M.M./ Podushnikova, K.A.

TITLE: On the anisotropy of the electron energy distribution in the "alpha" installation 19

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.1, 1965, 172-174

TOPIC TAGS: plasma, plasma energy distribution, electron energy

21

ABSTRACT: The electron energy distribution in the plasma of the "alpha" installation was measured at the instant of maximum discharge current with a triple-grid probe. The probe was oriented so that its electrodes were perpendicular to the magnetic field at the instant of maximum current; by rotating the probe through 180° it was possible to determine separately the energy distribution of the electrons that were accelerated or retarded, respectively, by the circuital electric field. Although no anisotropy of the ion energy distribution had been detected in previous measurements, the electron energy distribution was found to be indeed anisotropic. The observed electron energy distribution could be represented by a displaced Maxwellian curve in which the energy of the directed motion was from 3 to 15% of the

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ACCESSION NR: AP5003260

3

thermal energy. These results are similar to those obtained by A.Gibson and D.W. Mason (Proc.Phys.Soc.79,326,1962) for the "zeta" installation. The interpretation of the results is discussed very briefly, and it is suggested that reflection from field fluctuations prevents any considerable number of electrons from being continuously accelerated, so that the effect of the longitudinal electric field is merely to render the electron velocity distribution slightly anisotropic. "We are grateful to B.P.Konstantinov, V.Ye.Golant and D.G.Bulyginskiy for the interest they have shown in the work and for much valuable advice." Orig.art.has: 2 figures.

ASSOCIATION: none

SUBMITTED: 12Aug64 ENCL: 00 SUB CODE: ME

NR REF SOV: 004 OTHER: 002

Card 2/2

CHERNYAVSKIY, I.Sh., inzh.; DYU IN YU [Tiu Ying-yu], inzh.; GALAKTIONOV, D.S., inzh.

Effect of the rigidity of cardan shaft on dynamic loads in tractor transmission. Mashinostroenie no.4:99-100 Jl-Ag '65.

(MIRA 18:8)

GALAKTIONOV, F. D.

4398. GALAKTIONOV, F. D. --Grebnegibochnaya mashina dlya krovel'nykh rabot. (predisl. K. T. Obukhova). L. M., GOS Izd. lit. po stroitel'stvu i arkhitekture, 1954. 31 s. s ill. 20 sm. (novatory stroit industrii). 4.000 ekz. 50k. --(55-31)p
695.7.0025

SO: Knizhnaya Letopsis', Vol. 1, 1955

L 11945-66 EWT(l)/EWP(e)/EWP(m)/EWT(m)/ETC(F)/EWG(m)/EWA(d)/EWP(t)/ECS(k)/EWP(b)/
ACC NR: AP6001918 EWA(h)/EWA(c)/ UR/0294/65/003/006/0928/0930
ETC(m) IJP(c) JD/WW/JW/JG/AT/WH

91
B

AUTHOR: Galaktionov, I.I.(Leningrad)
44,55

ORG: None

TITLE: The termodynamic parameters of a mixture of carbon dioxide and argon beyond the front of a direct shock wave

SOURCE: Teplofizika vysokikh temperatur, v.3, no.6, 1965, 928-930

TOPIC TAGS: shock wave, thermodynamic properties, carbon dioxide, argon

ABSTRACT: In investigating the absorption of gases heated to high temperatures in shock tubes, the gas being investigated is diluted with an inert gas to avoid complete absorption and to obtain the effect of a heat "bath". In this connection, calculations have been made of the thermodynamic parameters of a mixture of carbon dioxide and argon beyond the front of a shock wave, assuming the establishment of a quasi steady-state equilibrium with respect to the translational, rotational, and vibrational degrees of freedom of the carbon dioxide molecule. Calculations were made for temperatures of 2000-6300°K. The ionization of argon and the dissociation of carbon dioxide were not taken into account since the relaxation time of the dissociation of carbon monoxide is much

21,44,55

Card 1/2 UDC: 533.6.011.72:536

L 11945-66

ACC NR: AP6001918

0

greater than the vibrational relaxation. Experimental results are shown in tabular form. Orig. art. has: 4 formulas and 2 tables.

SUB CODE: 20/ SUBM DATE: 15Jan65/ ORIG REF: 003/ OTH REF: 003

bch

Card 2/2

L 04573-67 EWT([illegible]) EWP([illegible]) IJP(c) WW/GG

ACC NR: AP6032448 SOURCE CODE: UR/0368/66/005/003/0385/0386

AUTHOR: Galaktionov, I. I.; Startsev, G. P.

50
B

ORG: none

TITLE: Light source for investigations in a shock tube in the near vacuum ultraviolet

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 3, 1966, 385-386

TOPIC TAGS: discharge tube, shock tube, uv spectrum, flash lamp

ABSTRACT: The authors describe a simple design of a U-shaped flash lamp that produces a continuous spectrum from 1600 Å to the visible part of the spectrum (Fig. 1). The working pressure is 6 - 10 mm Hg. The flash is ignited by discharging a capacitor from 2.5 - 3 kv through an artificial long line consisting of LC sections. The uniform part of the flash lasts 50 μsec, and the amplitude is reproducible from flash to flash within 5%. A sample oscillogram of the absorption of CO_2 heated in the shock tube to 5000K, obtained at 1720 Å wavelength, is presented by way of an example. Orig. art. has: 2 figures

Card 1/2 UDC: 535.89 + 533.6.071.8

L 0457-67

ACC NR: AP6032448

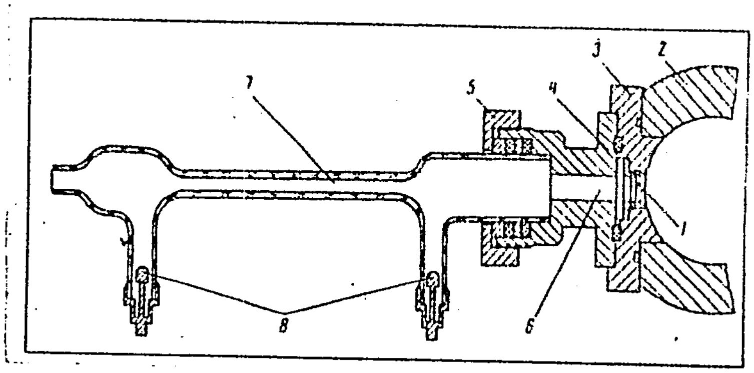

Fig. 1. Overall view of the source and of the low-pressure compartment of the shock tube. 1 - LiF peephole, 2 - low-pressure compartment, 3 - peephole mount, 4 - lamp gasket flange, 5 - nut, 6 - long diaphragm, 7 - capillary, 8 - tungsten electrodes.

SUB CODE: 20/ SUBM DATE: 09Nov65 / ATD PRESS: 5100

Card 2/2

GALAKTIONOV, I.V.; YEGOROV, M.D.; GRINEVSKIY, I.A., inzhener, redaktor; MATSEYEVSKAYA, Ye.M., tekhnicheskiy redaktor

[Experience erecting contact system poles and maintenance buildings in railroad electrification] Opyt sooruzheniia opor kontaktnoi seti i tekhnicheskikh zdanii pri elektrifikatsii zheleznykh dorog. Moskva, Gos. transp. zhel.-dor. izd-vo, 1953. 112 p. (MLRA 7:10)
(Railroads--Buildings and structures)
(Railroads--Electrification)

GALAKTIONOV, I.V.

Temperature effect on contact system pole foundations. Transp.stroi 5 no.5:21-22 Jl '55. (MIRA 8:12)

1. Nachal'nik tekhnicheskogo otdela tresta Tomsktransstroy
(Electric lines--Poles)

GALAKTIONOV, I.V.

Experience in electrifying the Novosibirsk-Mariinsk section.
Transp. stroi. 8 no.11:11-12 N '58. (MIRA 12:1)

1.Nachal'nik tekhnicheskogo otdela tresta Tomsktransstroy.
(Siberia--Railroads--Electrification)

GALAKTIONOV, I.V.

Stability of contact-system supports erected on frozen ground. Transp. stroi. 9 no.6:34-36 Je '59. (MIRA 12:11)

1. Nachal'nik tekhnicheskogo otdela tresta Tomsktarnsstroy.
(Electric lines--Poles) (Frozen ground)

GALAKTIONOV, I. V.

Special features of the assembly of series 1-335 large-panel buildings in winter conditions. Transp. stroi. 13 no.3:31-34 Mr '63. (MIRA 16:4)

1. Nachal'nik tekhnicheskogo otdela Zapsibtransstroya.

(Precast concrete construction--Cold weather conditions)
(Apartment houses)

GALAKTIONOV, I.V.

Precast foundations for large-panel buildings. Transp. stroi. 14
no.6:26-28 Je '64. (MIRA 18:2)

1. Nachal'nik tekhnicheskogo otdela tresta Zapsibtransstroy.

1. Galaktionov, P. A., Eng.

2. USSR (600)

4. Agricultural Machinery

7. Jet Method for cleaning grease stains, rust and scale, Sel'khozmashina, No. 12, 1952

9. **Monthly List of Russian Accessions**, Library of Congress, February 1953. Unclassified.

[illegible]ONOV, P.A.

19

2

Progressive technological processes for cleaning and protecting metallic articles. F. A. Galaktionov and L. M. Vitkind. *Avtomobil. i Traktor. Prom.* 1956, No. 4, 28-32. Alk. degreasing, acid pickling, phosphating, and electroly Zn plating from cyanide solns. are improved by substitut conventional tank treatment with applying solns. as a spra Details of the processes are examd. D. Gul

Nauchno-issledovatel'skiy institut Traktorosel'khoz
Nauchno- " " Avtoprom

SOV/81-59-10-35261

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 10, p 272 (USSR)

AUTHOR: Galaktionov, P.A.

TITLE: The Anti-Corrosion Protection of Articles Designed for Countries With Tropical Climate

PERIODICAL: Sb. Kom-t po korrozii i zashchite metallov Vses. sov. nauchno-tekhn. o-v, 1958, Nr 3, pp 3-10

ABSTRACT: Information is given on the types of galvanic coatings and their thickness used in Czechoslovakia and East Germany for the protection of machine parts sent into countries with tropical climate, and also the methods of their packing and preserving.

Ya. Matlis

Card 1/1